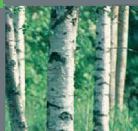
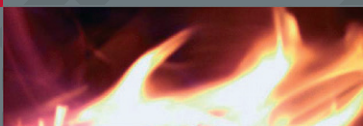


# ARITERM

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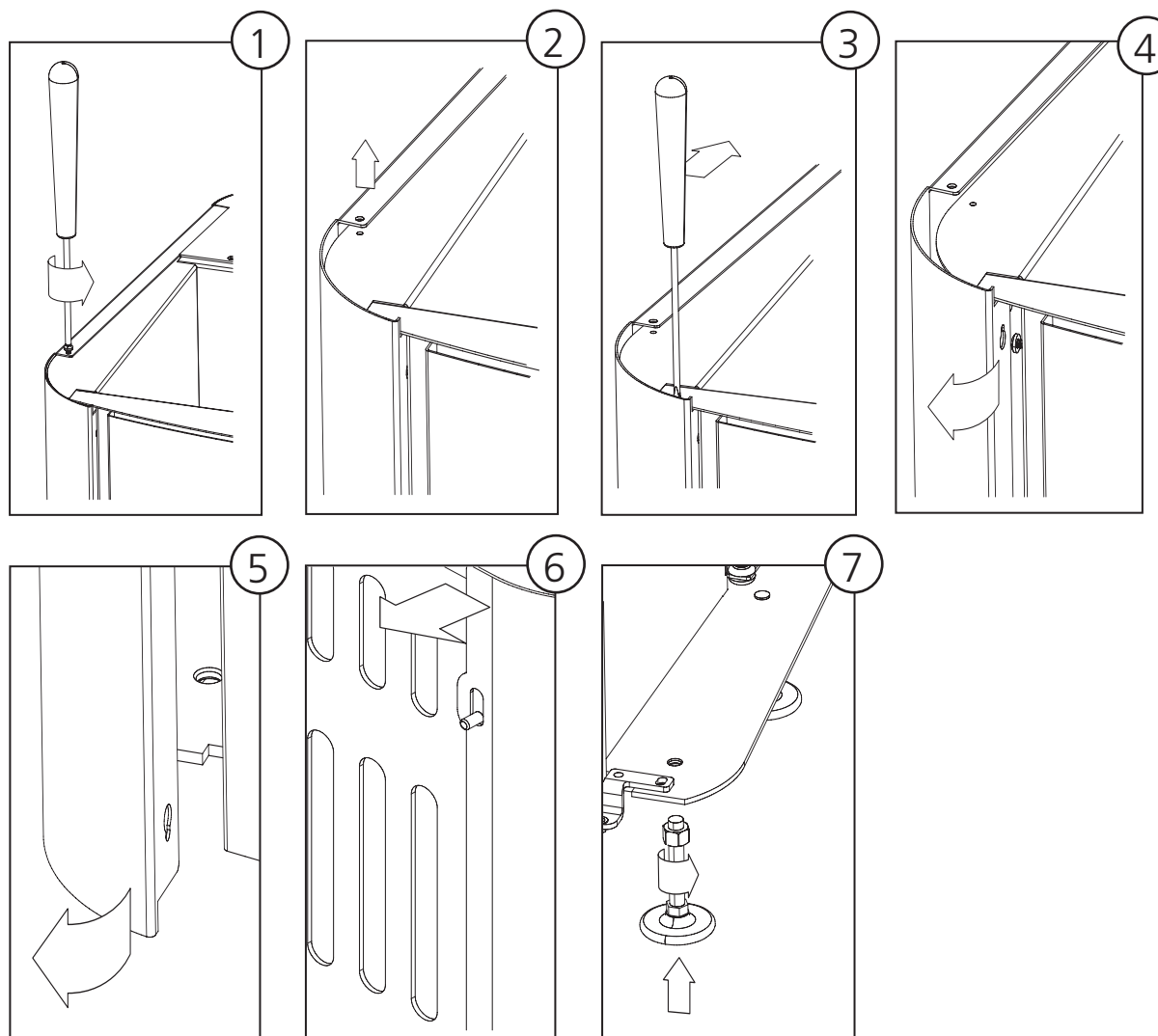
## INSTALLATION and OPERATING INSTRUCTIONS PELLET STOVE LILLA FRÖ





## ■ Unpacking

- Remove the wood packaging.
- Detach the side panels and install the feet as follows:
  1. Loosen the screw on the top of the side panel.
  2. Lift the side panel straight up.
  3. Unhook the side panel by carefully prying with a screwdriver...
  4. ...and at the same time pull the panel out/forwards.
  5. Also unhook the panel at the lower edge by pulling the panel out/forwards.
  6. Detach the side panel from the back panel by lifting it straight back and slacken off the two wooden screws that hold the stove to the pallet.
- Repeat 1 – 6 on the other side.
- 7. Lean the stove to the side, so the two adjustable feet can be threaded in, as illustrated. Screw them in until they just reach through the plate. Lock in place with counter nuts on the underneath.
- Repeat on the other side.
- Lift the stove down off the pallet. Take hold of the stove's bottom plate. Do not lift by the back plate or the magazine. Connect the control panel's control cable, if this is not already in place. Reinstall the side panels in reverse order according to 6 - 1.
- Place the stove in its final location and connect it to the flue. Adjust the height using the feet, if necessary.



## ■ Care and maintenance summary

We recommend that you follow the care and maintenance instructions in order to obtain the best possible results from your stove.

- The stove needs air in order to function, never close the supply air vent to the house.  
(This is not an issue for those who chose a solution with Ariterm Arrow; this ensures that the stove has air).
- Your engineer has adjusted the amount of fuel used in the stove's starting dose. Use the menu system to change the starting dose and output, see section 1.6 in the manual.
- We recommend removing the ash daily during the firing season, or each time pellets are filled. Remove ash through the door using the handle supplied. Lift out the burner from the burner housing and remove any ash from the ash box (unburned pellets must not be emptied into the ash box, there is a risk of them starting to smoulder).
- After a period of use, the glass in the door becomes coated with soot and eventually becomes opaque. Therefore, it should be cleaned on the inside using kitchen roll moistened with normal tap water. We recommend that this is done every time the pellet hopper is refilled. Wait until the glass has cooled before you start cleaning!
- Vacuum the ash from the ash box once between visits from the chimney sweep, which is normally twice a year. The ash hatch is located behind the filler hatch and it can be lifted straight up after the plastic knob has been screwed loose.
- The stove's tubes are swept automatically using the sweeping unit (patent pending) every time the hatch is opened, and they normally do not need any further sweeping.
- Vacuum the interior of the stove once a year to prevent the stove's fans from becoming jammed by the soot that gets into the stove. To access the fan first pull out the plug then remove one of the stove sides.
- If you have installed Ariterm Arrow, ash must be removed from it at least once every firing season.

**NOTE!** When you start your stove for the first time there may be a slight smell of paint, this is because the paint on the stove body must cure fully before one can obtain odour free operation.

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## ■ 1 Product description

### ■ 1.1 General

The Lilla Frö stove has been developed to work as a primary heat source. The stove's high level of efficiency, in combination with automatic operation, means that the stove replaces up to 80 % of the heating in a normal family house with electricity as heating source. The stove is designed for firing with wood pellets and requires an electrical power supply. In event of a power cut, the stove requires a reserve power source from an uninterruptible power supply (UPS) or a petrol driven generator in order to function.

The integrated convection fan distributes the hot air around the house, for best effect the stove should be centrally located on the lower floor of the house. The room temperature is easily set from the control panel. During thermostat operation the stove automatically ignites and extinguishes the stove when the set temperature is reached.

It is filled with pellets by opening the hatch under the stove's top panel. The spacious hopper means that the stove only needs to be refilled a maximum of twice a day. The filler hatches and door are equipped with safety switches. Two safety thermostats are mounted together with the switches in a safety coil to prevent overheating and back-fire.

Lilla Frö can be installed without a traditional chimney if your home does not have one. The solution that makes this possible is called Ariterm Arrow, which is a patent-pending, fan controlled, flue gas duct that goes straight out through the wall.

The stove must not be used as an incinerator and must only be fired using wood pellets acc. to EN 14961.

**NOTE!** The stove's surfaces on and around the glass become extremely hot.

## ■ 1.2 Components

The top panel (1) is opened by lifting the front edge. Under this are the ash hatch (2) and the filler hatch (17) for the pellet hopper.

The front (5) is opened to reach the door (7). The door is unlocked with the enclosed handle and it opens forwards, towards the floor. The burner housing (8) is located in the hearth and is accessible when the door has been opened. It is installed with four screws on the rear of the stove body. The burner (9) sits loose in the burner housing. The firing element (10) is located in the burner housing behind the burner.

The firing element gives off the heat required to ignite the fuel. The flame sensor (11) is beside the ignition unit and indicates whether there is flame in the burner. The ash box (12) is inserted in the bottom of the hearth, under the burner housing. It can be removed when the door has been opened.

The combustion fan (13) is placed on the rear of the burner housing and provides the burner with air for combustion. If the stove is connected to the flue Drag, the fan is replaced by a hose, which is connected to the wall lead-in. The control circuit board (15) is placed inside the stove and it is powered by an electronic transformer that supplies 12V-voltage to the electronics and control and sensors. The hot air fan (16) is located inside the stove and sucks air from the rear of the stove, which is then heated up in the combustion chamber and smoke tubes (4) and expelled through holes, partly in the back plate and partly in the front.

The pellet hopper (17) is filled through the filler hatch (18). The hatch is locked with a knob. The pellet feeder (19) sits in the bottom of the pellet hopper and it consists of a slowly rotating screw. The patented design means that pellets cannot stick in the feeder. Safety thermostats (20) are mounted on the pellet hopper's right side (trip at 85°C) and the ash box (trips at 204°C).

The stove must not be modified and only spare parts recommended by the manufacturer may be used.

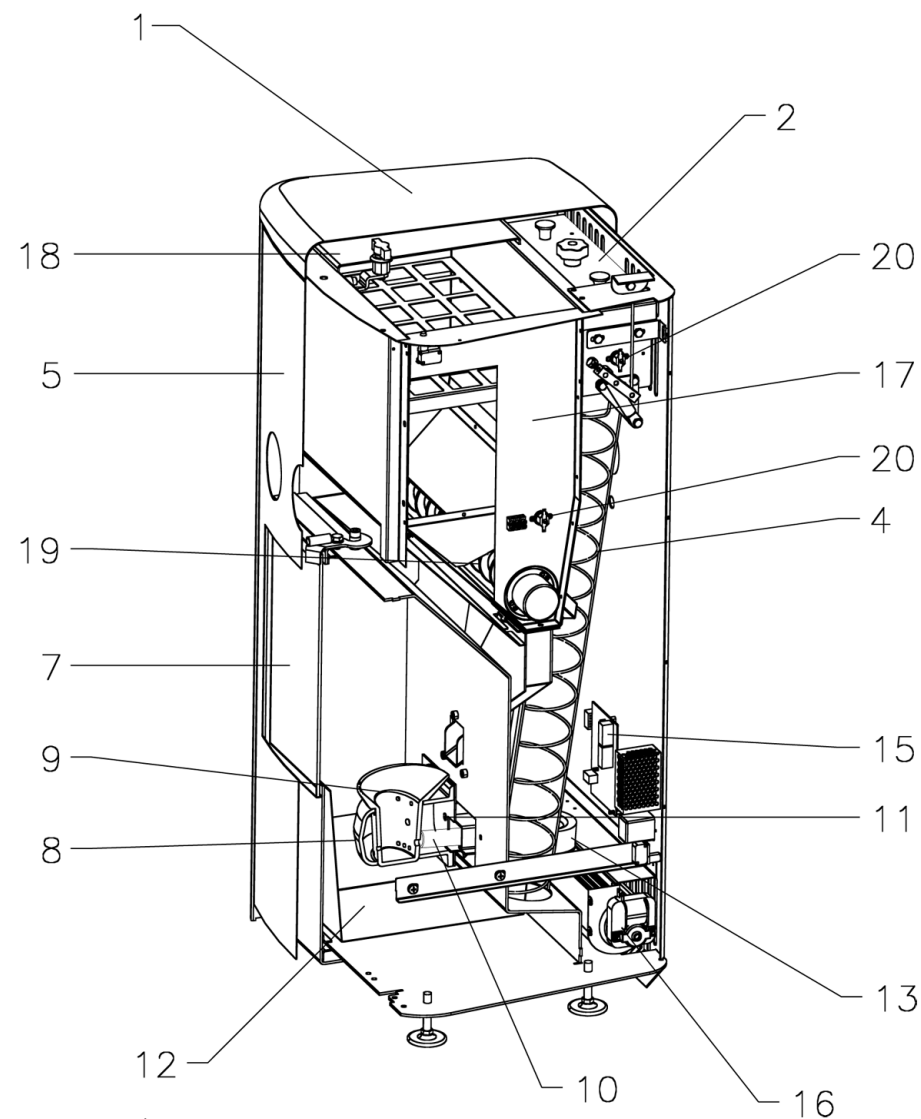
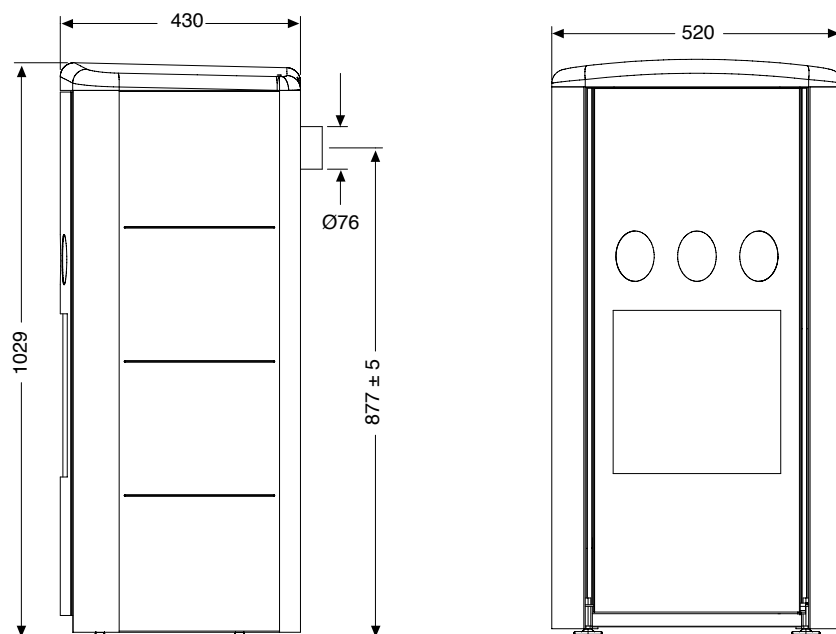


Fig. 1

## ■ 1.3 Technical data

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Heating output HI / LO .....        | approx. 5 / 3 kW                   |
| Pellet hopper .....                 | 30 litres (approx. 20 kg*)         |
| Efficiency level HI / LO .....      | approx. 92 / 94%                   |
| CO HI / LO .....                    | approx. 300 / 300 ppm              |
| Smoke temperature HI / LO .....     | <180 / 120°C                       |
| Flue gas fan HI / LO .....          | 3.2 / 2.4 g/s                      |
| Temperature range thermostat .....  | approx. 10 - 30°C                  |
| Weight .....                        | 75 kg                              |
| Electrical connection .....         | 230 V 50 Hz                        |
| Electrical output (firing) .....    | 450 W                              |
| Electrical output (operation) ..... | 20 W                               |
| Fuel .....                          | wood pellets Ø6 or 8 mm, EN 14961. |

\* Depending on fuel density.



## ■ 1.4 Control panel

The control panel has a display and adjustment dial (see fig. 3):

- The display shows the operating mode and the current temperature. Explanatory text scrolls through the display every 5 seconds.
- The adjustment dial is used by pressing or turning.
  - Turn it to scroll through the menu or change the value when adjusting.
  - Pushing once makes a selection in the menu.
  - To ignore the change wait 4 seconds and the value is reset.

Example:

Power the stove. Pressing once causes the panel to ask "Start?".

Pressing again means that you confirm the question and the stove starts.

If you turn one increment clockwise instead you jump in the main menu and come to "Stop T", "Usermenu" and "Back".

Stop T: You set the desired stop temperature here.

Usermenu: The other time and temperature settings are adjusted here. To make more advanced settings one must have code "SetCode".

The stove is started by pressing the control panel dial and confirming. "Start?" by pressing again. Take care not to start the stove when there are flammable objects above or immediately adjacent!

To shut off, press the control panel dial and confirm "Stop?" by pressing once.

Other menu steps are shown in section 1.6.

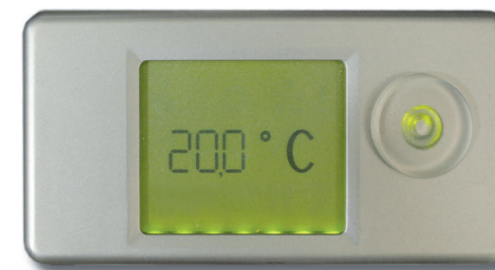
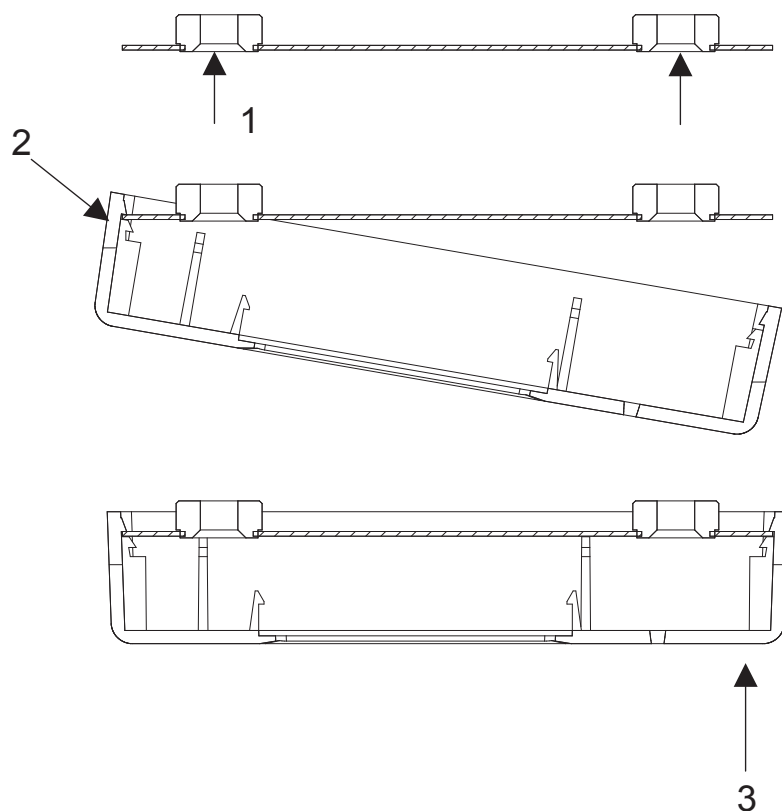


Fig. 3

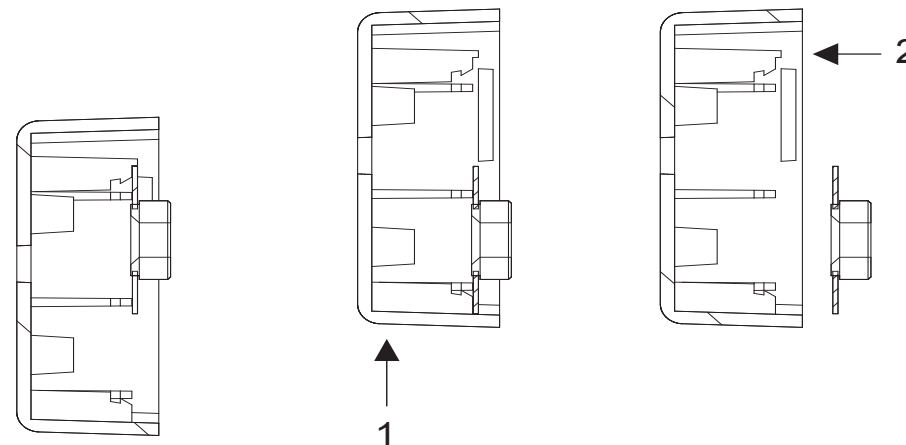
## ■ Installing the control panel

1. Install the wall mounting with 2 screws.
2. Hook one corner of the panel onto the wall mounting.
3. Press the other corner of the panel onto the wall mounting.



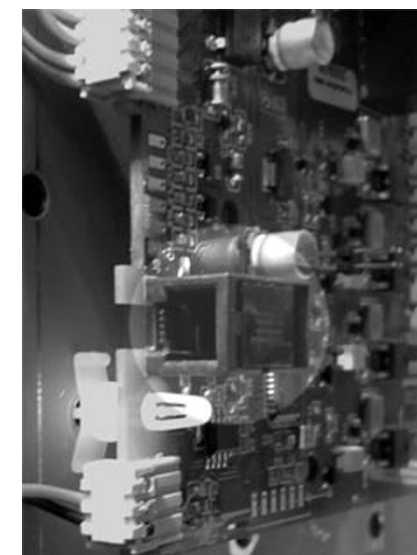
## ■ Removing the control panel

1. Slide the panel straight up.
2. Lift the panel straight out from the wall



## ■ Connecting the control panel

Connect the control panel in the modular connection on the side of the control circuit board (image).



## ■ 1.5 Safety system

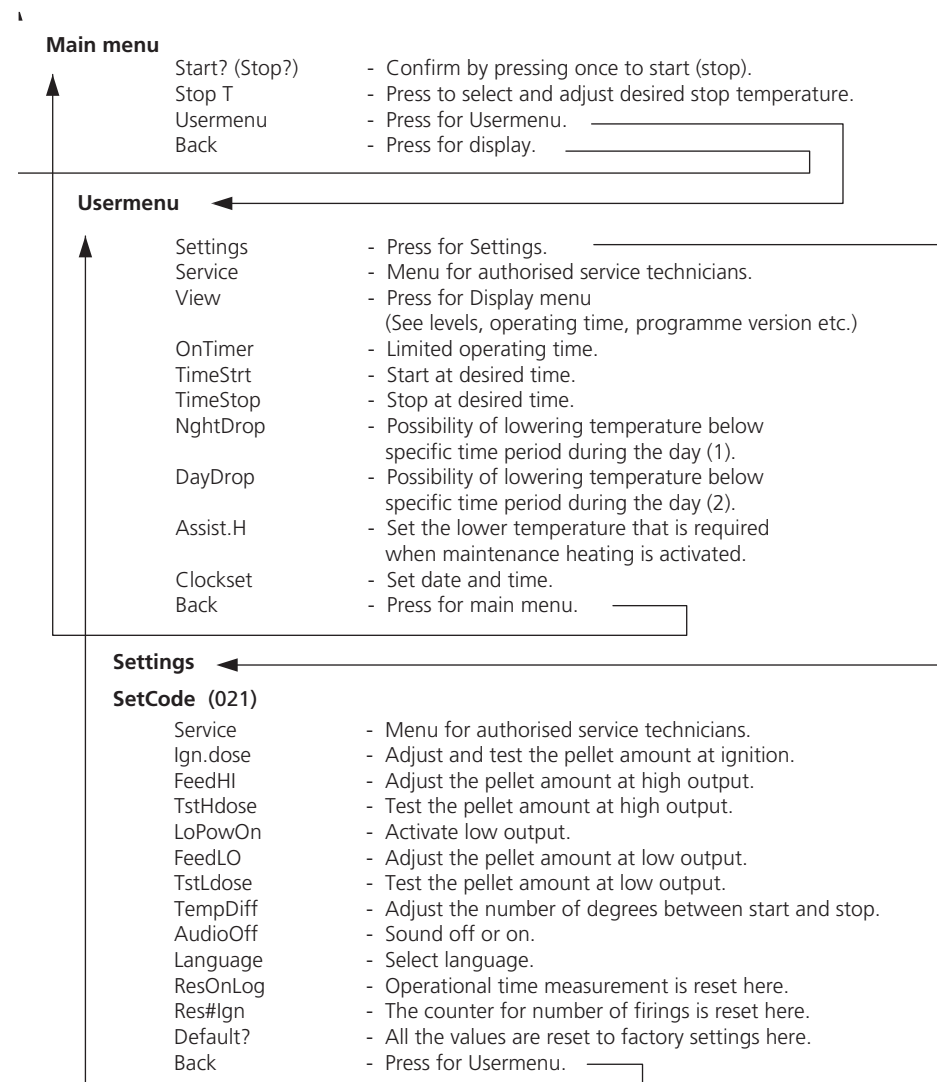
The K6 stove is equipped with five independent safety systems.

1. The feeder releases pellets into a chute, which means that the fuel cannot burn back and spread the fire into the hopper.
2. The pellet hopper is equipped with a tight fitting filler hatch. The hatch must be closed and locked during use, as soon as the hatch is opened the fuel feed is interrupted and a warning text is shown on the display.
3. Two thermostats are located as shown in section 1.2 Components (fig 1). If the maximum permitted temperature is exceeded the feeder stops, the stove switches itself off and the display shows "Operational stoppage". The alarm must be confirmed by pressing a button. Do not forget to rectify the cause of the operational stoppage.
4. A flame sensor is located in the burner (fig 1). If the flame goes out or pellets are fed in faster than they can be burnt and no flame is indicated for approx 3.5 minutes, the stove switches itself off, and an exclamation mark illuminates while "operational stoppage" scrolls through the display.
5. The door is equipped with a safety switch. The door must be closed during operation, if it is opened the fuel feed is interrupted.

The safety switches are tested by unlocking the filler hatch during use or start-up.  
The pellet feeder should then stop.

## ■ 1.6 Control system settings

The settings are made in the control panel in a menu system. Before entering the menu the panel is in display mode. Enter the menu by pressing the dial.  
If the menu is inactive for a long time the panel returns to display mode. The menu system consists of a main menu and several sub-menus "Usermenu" and "Settings".  
Turn the dial to scroll through the menu. To jump out of the menu, hold the button in for 4 seconds. The menu appears as follows:



Flame  
Indicated



Firing element  
Activated



Feeder motor  
Activated



Combustion fan  
Activated



Fault function  
Indicated



Stove  
in operation

## ■ 1.6.1 control process

Otherwise the electronics manage all processes as follows:

### • Start

| Time           | Events                                                                                                                                                                                                               | Comments                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 0 secs         | <ul style="list-style-type: none"> <li>Firing element on.</li> <li>The firing element symbol illuminates.</li> </ul>                                                                                                 |                                                                                                                           |
| 120 secs       | <ul style="list-style-type: none"> <li>The motor symbol illuminates.</li> <li>The feeder starts.</li> </ul>                                                                                                          |                                                                                                                           |
| 220 - 330 secs | <ul style="list-style-type: none"> <li>The feeder stops (Starter dose).</li> <li>The combustion fans starts pulsing and stops twice.</li> <li>The motor symbol goes out.</li> </ul>                                  | The time depends on the set pellet amount at ignition. Pellet level should be approx. 5 mm above the firing element hole. |
| Approx 6 min   | <ul style="list-style-type: none"> <li>Hot air fan on.</li> <li>If the flame sensor indicates flame, the firing element is shut off, the flame symbol illuminates and the firing element symbol goes out.</li> </ul> | The flame symbol is displayed as long as the flame sensor indicates a flame.                                              |
| Approx 8 min   | <ul style="list-style-type: none"> <li>The feeder on at low output.</li> <li>Maximum time for firing element.</li> </ul>                                                                                             | Runs from 1.8 - 6 seconds every 10th second.                                                                              |
| Approx 10 min  | <ul style="list-style-type: none"> <li>Operating phase.</li> </ul>                                                                                                                                                   | The thermostat regulates the output according to the set values.                                                          |

### • High output operation

|                   |                                                                                                                                                                                       |                                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| After "Start".    | <ul style="list-style-type: none"> <li>High output scrolls through the display.</li> <li>The feed runs from 3-10 seconds every 10th second.</li> <li>Combustion fan Fan HI</li> </ul> | The time depends on the set fuel amount at high output.                                                                                                                                                                                         |
| Every 10 seconds. | <ul style="list-style-type: none"> <li>Set temperature and room temperature are compared.</li> <li>The flame sensor is checked</li> </ul>                                             | <p>If the room temperature exceeds the set temperature, the stove switches to low output. Not if "Stop T" is "On".</p> <p>If no flame can be detected the exclamation mark illuminates and the stove goes into "Operational stoppage" mode.</p> |

### • Low output operation (deactivated from the factory)

| Time              | Events                                                                                                                                                                                | Comments                                                                                                                                                                                                                                                                                |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| After "Start".    | <ul style="list-style-type: none"> <li>Low output scrolls through the display.</li> <li>The feed runs from 1.8-6 seconds every 10th second.</li> <li>Combustion fan Fan LO</li> </ul> | The time depends on the set pellet amount at low output.                                                                                                                                                                                                                                |
| Every 10 seconds. | <ul style="list-style-type: none"> <li>Set temperature and room temperature are compared.</li> <li>The flame sensor is checked</li> </ul>                                             | <p>If the room temperature exceeds the set temperature by more than 2°C the stove goes to stop and then standby mode. Standby scrolls through the display.</p> <p>If no flame can be detected the exclamation mark illuminates and the stove goes into "Operational stoppage" mode.</p> |

### • Stop

|        |                                                                                                                                       |                                        |
|--------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| 0 secs | <ul style="list-style-type: none"> <li>The feeder stops</li> <li>Combustion fan runs at max.</li> <li>The hot air fan runs</li> </ul> | To blow ash out of the burner crucible |
| 4 min  | <ul style="list-style-type: none"> <li>Combustion fan stops</li> <li>The hot air fan stops</li> </ul>                                 |                                        |

## ■ 2 Installation

### ■ 2.1 Positioning

The installation must meet all applicable European standards, local and national requirements.

The stove should be located in a central position on the lower floor of the house to facilitate heat spread. Consideration must be made of how the chimney is arranged, contact the dealer. Try to avoid placing it in a corner, but if it cannot be avoided observe the minimum distances to the walls according to fig. 7.

The Building regulations contain a number of regulations to prevent fires.

Generally speaking, the regulations are applied if the following is being observed:

- The stove must be placed at least 100 mm from the wall.
- The underlay must be made of non-flammable material, and extend at least 300 mm to the front and 100 mm to the side of the stove. If the hearth surface is made of steel it must be at least 0.7 mm thick.
- Flammable material must not be exposed to temperatures exceeding 80°C.

Otherwise the stove must have at least 1 m free space on one side in order to allow service. The weight of the stove is so low that no extra demands are made on the joists etc.

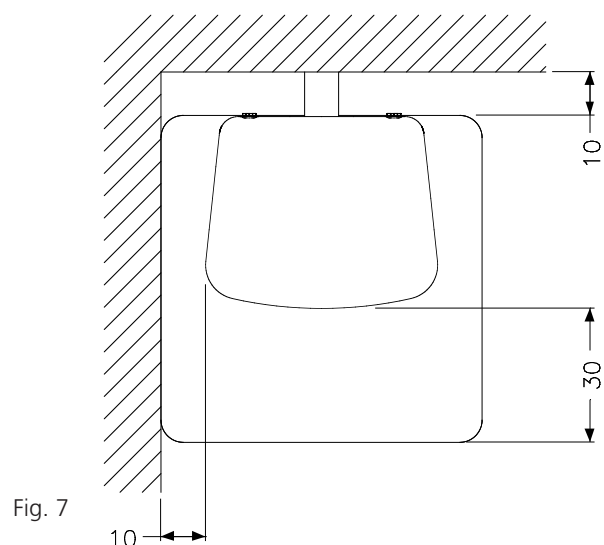


Fig. 7

### ■ 2.2 Chimney

The regulations regarding chimneys can be found in the Building regulations.

The most important regulations are:

- The highest surface temperature of the flue including insulation and surrounding shaft may be 100°C when the stove is running at full output. The surface temperature of adjacent building parts may not exceed 80°C.
- Minimum diameter (round duct) or side (rectangular duct) should be 80 mm.
- The smoke ducts must be made of non-flammable material of sufficient durability and with sufficient resistance to temperature variations, climate effects, corrosive smoke gases and slag and use of sweeping tools etc.
- It must be possible to clean the flue. If fallen ash cannot be removed via the stove's cleaning hatch another cleaning hatch must be arranged. The cleaning hatch must not be located in a room other than the one in which the stove is located.
- Connection to the chimney must be via a steel flue pipe of at least 2 mm thickness, or minimum 1 mm thickness if stainless steel. The joint is sealed with hard packed glass fibre or elastic sealing compound that can tolerate at least 250°C.
- All parts of the chimney situated outdoors must be insulated.
- The stove must NOT be connected to divided chimneys or flue gas ducts.

The smoke gases contain water vapour that can condense to water if the temperature is sufficiently low (approx 55°C) which can cause damage both to the chimney and stove. If the temperature approx. 1 m below the chimney top is below 60°C one should install an insert, speak to your engineer or chimney sweep.

**In the event of a chimney fire, pull out the plug and call the emergency services.**

### ■ 2.3 Ventilation

There must be at least one air supply ventilator in the room where the stove is located. If there are other exhaust fans increase the number of supply ventilators until the fans no longer affect the pressure ratio. We also recommend that a chimney fan is installed.

### ■ 2.4 Arterm Arrow

Information about installation with Arterm Arrow instead of a traditional chimney is available in a separate manual. See Arrow Wall fan Installation and Operation instructions.

## ■ 2.5 Electrical connection

The back of the stove is equipped with a 1.5 m long cable with plug, which must be connected to a 230 V 50 Hz mains supply. The internal wiring diagram is shown in fig. 8.

**NOTE!** If the connection cable is damaged it must be replaced by one of the same type, contact the dealer.

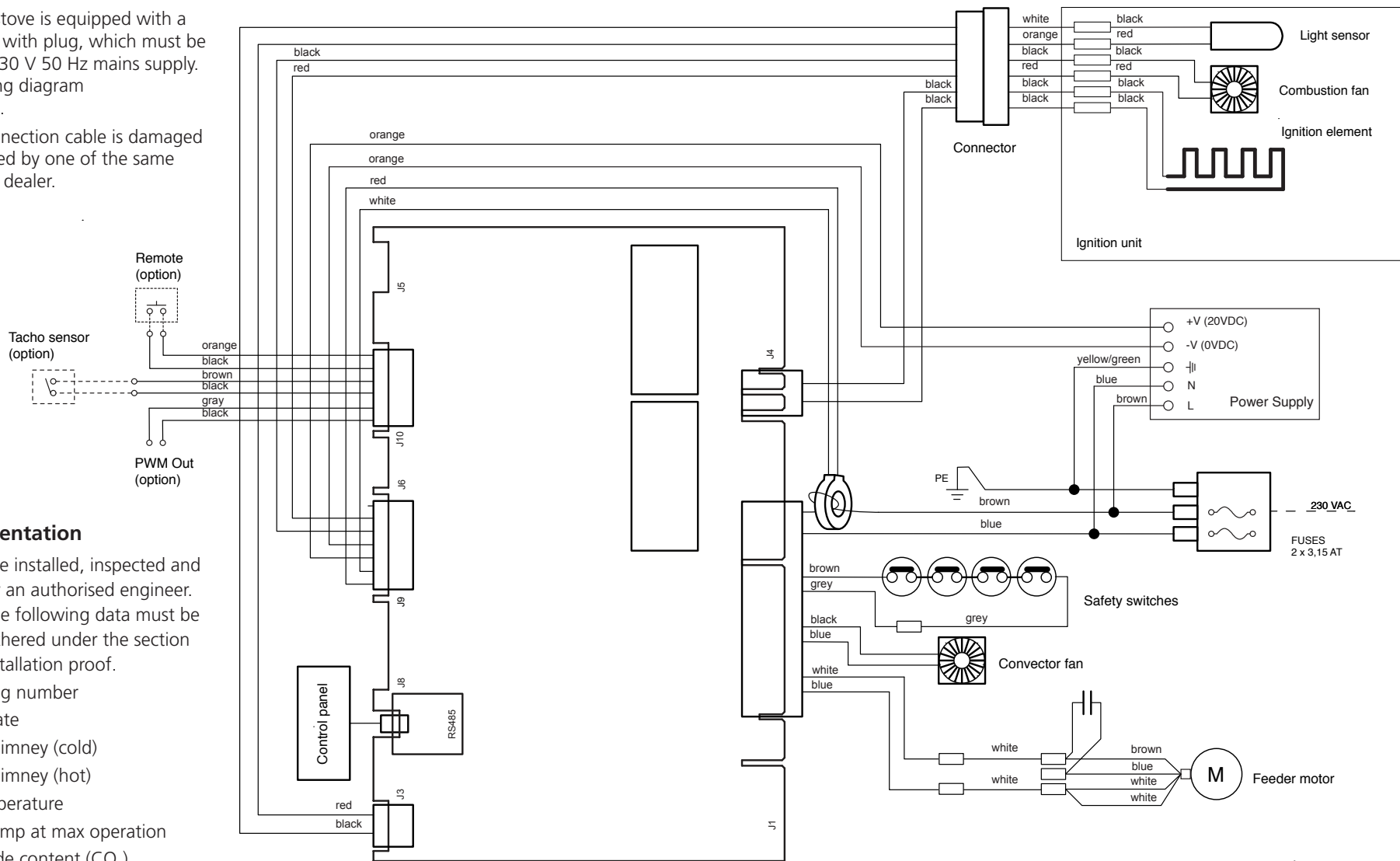


Fig. 8

## ■ 2.6 Documentation

The stove must be installed, inspected and commissioned by an authorised engineer. At installation, the following data must be collected and gathered under the section Warranty and Installation proof.

- Manufacturing number
- Installation date
- Vacuum in chimney (cold)
- Vacuum in chimney (hot)
- Outdoor temperature
- Smoke gas temp at max operation
- Carbon dioxide content (CO<sub>2</sub>)
- Distance to combustible material

## ■ 3 Operation and maintenance

The K6 stove is designed for a long service life, motors and other moving parts are of a very high quality. All bearings are lifetime lubricated and the only preventative maintenance that is normally required is sweeping and cleaning.

### ■ 3.1 Fuel

The K6 stove functions best with Ø6 or 8 mm wood pellets, max length 40 mm. The pellets are supplied in plastic sacks that can be stacked on pallets or other suitable surfaces. Avoid exposing the sacks to moisture or mechanical stresses (vibrations or blows). Careless handling of pellets can easily reduce the fuel to sawdust. The sawdust is fed into the burner with the pellets but can cause poor combustion. Fill the hopper with pellets slowly and without too great a drop. The feeder completely empties the hopper and therefore does not normally require cleaning.

The hopper is filled by opening the hatch above the pellet magazine.

Unlock by turning the locking knob a 1/4 turn clockwise. The hopper can be filled while the stove is running, but because the feeder switches off when the hatches are opened, you only have a few minutes before the hatch must be locked again. If the hatch is open for longer, the flame is likely to get so low that the stove will switch itself off, after which it must be restarted again after the switch is set to the "OFF" position.

The stove is started by moving the switch to the "ON" or "THERMOSTAT" positions. Take care not to start the stove with flammable objects on top of, or in the immediate vicinity of, the stove! Shut off is carried out by moving the switch to the "OFF" position. The stove must not be covered.

### ■ 3.2 Ash removal

The amount of ash that build up in the burner varies depending partially on how the stove is fired (number of starts and stops, division between full and half speed), and partially on the quality of the pellets. The ash content varies between different pellets, but can also differ between different batches from the same factory. This can only be established through trial and error, but generally the ash layer in the bottom should be a maximum of a centimetre deep. We recommend removing the ash daily during the firing season, or each time pellets are filled.

Remove ash through the door using the handle supplied. Lift out the burner from the burner housing and remove any ash from the ash box (unburned pellets must not be emptied into the ash box, there is a risk of them starting to smoulder). Certain pellets generate a hard cake of cinders, this may need to be broken up using a screwdriver or removed using one's hands.

Ash from the stove must be stored in a container made of non-flammable material, for example a metal bucket, until it has cooled sufficiently that it can be held in one's hand. It can then be thrown away, bear in mind that wood ash contains nutrients that can be beneficial to gardens.

### ■ 3.3 The glass

During firing the stove door can get so hot that it can cause burn injuries if touched.

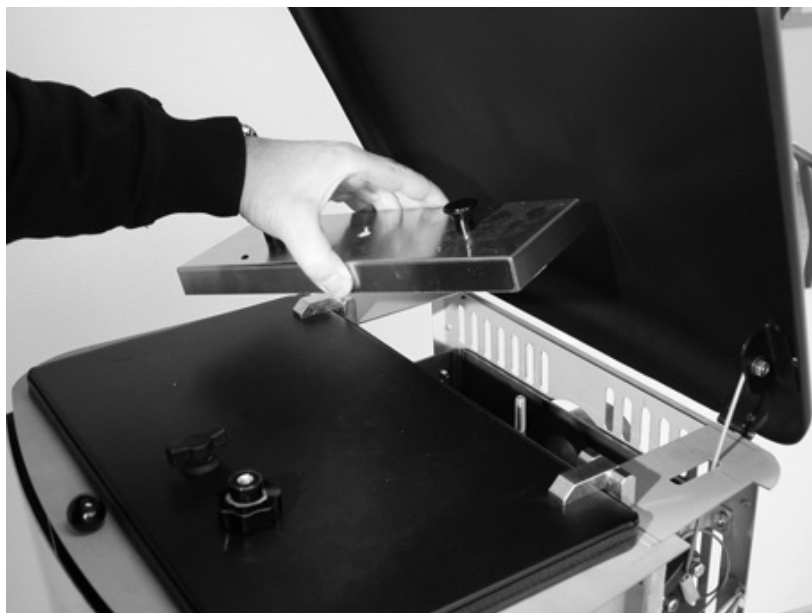
After a period of operation the glass in the door becomes coated with ash dust and eventually becomes opaque. It should, therefore, be wiped off from the inside using kitchen roll moistened with normal tap water, we recommend that this is done each time the pellets store is filled. No cleaning agent is usually necessary.

When cleaning the black and stainless steel outer panels, only use water and, where necessary, washing-up liquid.

## ■ 3.4 Sweeping

The chimney must be swept twice a year. The flue and its connection and the area underneath the cleaning hatch must be cleaned at least once between the chimney sweep's visits.

1. Open the top panel.
2. Unscrew the knob that locks the ash box.
3. Lift the ash box vertically by both knobs.
4. Vacuum clean the ash from the ash box.
5. Vacuum the horizontal flue all the way to the chimney.  
The hole is 50 mm in diameter, sufficiently large for a normal vacuum cleaner hose.  
If the flue Drag is installed, the sweeping can be done from the outside.
6. Make sure that the ash hatch is firmly in place after cleaning and tighten the knob properly.



**The chimney must be checked for blockages if unused for a prolonged period.**

## ■ 3.5 Hot air fan

Vacuum cleaning of the fans with a brush nozzle should be carried out a couple of times annually after removing the side hatch.

**Do not forget to pull the plug out** before the side hatch is removed.

1. Open the top panel.
2. Loosen the screw on the top of the side panel.
3. Snap the back of the side panel from the stove's back plate by prizing back the top and bottom corners of the side panel.
4. Unhook the panel, out - forwards.

**NOTE!** When vacuuming the hot air fan, be careful not to damage the long and vulnerable fan blades.

The fan bearings can start to whistle after operating for some time in a dusty environment. Rectify this with a drop of oil on both bearings.

## ■ 3.6 Operating stoppage

If the stove does not start, check first where the fault is located using the fault-tracing diagram below. If you consider that you have the necessary expertise, rectify the fault as suggested. If not, or if the fault cannot be located, contact your dealer.

**After an unsuccessful start attempt or operating stoppage, the burner crucible must always be emptied! If there are unburned pellets in the crucible it must not be emptied into the ash box.**

## ■ 3.6.1 Fault tracing and remedy

| Fault                                                        | Cause                                                                                                                                                                                                                                                                                          | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The stove does not start, green LED does not light.          | <ul style="list-style-type: none"> <li>The cable is not connected.</li> <li>No voltage at the socket.</li> <li>Stove fuse blown.</li> <li>The cable between the control panel and the control circuit board is not correctly connected.</li> <li>The stove is in the cooling phase.</li> </ul> | <p>Connect to earthed 230 V socket.<br/>Check the fuse.<br/>Change the fuse</p> <p>Remove one side hatch and check that the cable is connected to the card device. Check the same thing on the rear of the control panel.</p> <p>Wait until the fans have stopped.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| The stove does not start, "Standby" is shown in the display. | <ul style="list-style-type: none"> <li>Room temperature exceeds the set value by more than 2°C.</li> </ul>                                                                                                                                                                                     | Set the desired room temperature according to section 1.6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Pellets do not come out of the feeder.                       | <ul style="list-style-type: none"> <li>The hopper is empty.</li> <li>One of the MCBs is not switched on.</li> <li>One of the safety thermostats has deployed.</li> <li>Pellets have jammed in the feeder.</li> <li>The feeder does not rotate.</li> </ul>                                      | <p>Fill up the pellets.</p> <p>Ensure that the filler hatch is closed and locked properly. A slight clicking noise should be heard when the safety switch is activated.</p> <p>Check the fuel volume, and that the hot air fan functions. Wait until the stove has cooled. Reset by pressing the control panel.</p> <p>Feel inside the chute, in case pellets have jammed there. Empty the hopper. Loosen the panel above the feeder screw and remove any blocked pellets.</p> <p>Open the filler hatch, press down the safety switch to the right of the filling hole. If the feeder screw does not move (1 turn/min), check whether there is a voltage on the motor's terminal block, on the hopper's right side under the insulation.</p> |

| Fault                                                                               | Cause                                                                                                                                          | Action                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pellets do not ignite (no smoke)                                                    | <ul style="list-style-type: none"> <li>The firing element does not work.</li> <li>Bad connection.</li> <li>Starting dose too small.</li> </ul> | <p>Replace firing element.</p> <p>Check wiring and connections.<br/>Adjust the fuel volume.</p>                                                                                                                                                      |
| The stove stops shortly after starting (exclamation mark in the display)            | <ul style="list-style-type: none"> <li>Starting dose too small.</li> <li>One of the safety thermostats has deployed.</li> </ul>                | <p>Adjust the fuel volume.</p> <p>Remove the burner and check that the flame sensor is in the correct position and that the lens is clean.</p> <p>Clean flue, convection tubes, fans and ensure that the air intake of the stove is not blocked.</p> |
| Water is penetrating the chimney joints or is seen in the form of grey/white smoke. | <ul style="list-style-type: none"> <li>Too low output.</li> <li>Too low smoke temperature for the chimney.</li> </ul>                          | <p>Increase the fuel volume.</p> <p>The smoke temperature in the chimney 1 m below the top must be at least 60°C.</p>                                                                                                                                |

**After an unsuccessful start attempt or operating stoppage, the burner crucible must always be emptied!**

## Error codes

| Error code                                                                                  | Cause                                                                                                                                                                                                                   | Action                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Powfail.                                                                                    | <ul style="list-style-type: none"> <li>Power failure.</li> </ul>                                                                                                                                                        | Check the electrical connection.                                                                                                                                                                                                                                    |
| Errign:<br>The firing element is not drawing any power.                                     | <ul style="list-style-type: none"> <li>Poor contact to firing element.</li> <li>Defective firing element.</li> </ul>                                                                                                    | Check wiring and connections.<br>Replace firing element.                                                                                                                                                                                                            |
| ErrSafe:<br>The flame sensor has not detected a flame when the safety coil has been broken. | <ul style="list-style-type: none"> <li>One of the safety thermostats has deployed.</li> <li>One of the hatch switches is not switched on.</li> </ul>                                                                    | Check the fuel volume, and that the hot air fan functions. Clean the convection tubes. Reset by pressing on the panel.<br><br>Ensure that the hatch and door is properly closed. A weak clicking noise must be heard when closed.                                   |
| ErrStart:<br>The flame sensor has not detected a flame during the start-up phase.           | <ul style="list-style-type: none"> <li>The hopper is empty.</li> <li>Pellets have jammed in the feeder.</li> <li>The feeder auger does not rotate.</li> <li>Incorrectly adjusted starting dose. ("Ign.dose")</li> </ul> | Fill up the pellets.<br><br>Remove pellets from the chute. Ensure that there are no foreign objects in the chute.<br><br>Check that there are no foreign objects stuck in the feeder auger. Check switches and wiring to the motor. Replace motor.<br><br>See Menu. |

| Error code                                                                | Cause                                                                                                                                                                                                                                      | Action                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ErrorHI:<br>The flame sensor has not detected a flame during high output. | <ul style="list-style-type: none"> <li>Incorrectly adjusted fuel and/or air amount. ("FeedHI" or "Fan HI")</li> <li>The hopper is empty.</li> <li>Pellets have jammed in the feeder.</li> <li>The feeder auger does not rotate.</li> </ul> | See Menu.<br><br>Fill up the pellets.<br><br>Remove pellets from the chute. Ensure that there are no foreign objects in the chute.<br><br>Check that there are no foreign objects stuck in the feeder auger. Check switches and wiring to the motor. Replace motor. |
| ErrorLO:<br>The flame sensor has not detected a flame during low output.  | <ul style="list-style-type: none"> <li>Incorrectly adjusted fuel and/or air amount. ("FeedLO" or "Fan LO")</li> <li>The hopper is empty.</li> <li>Pellets have jammed in the feeder.</li> <li>The feeder auger does not rotate.</li> </ul> | See Menu.<br><br>Fill up the pellets.<br><br>Remove pellets from the chute. Ensure that there are no foreign objects in the chute.<br><br>Check that there are no foreign objects stuck in the feeder auger. Check switches and wiring to the motor. Replace motor. |

## ■ 4 Dismantling

### ■ 4.1 Burner

1. Open the door and remove the ash box.
2. Remove the four screws holding the burner flange to the stove wall (fig 10).
3. Pull the burner straight out until the cables connecting the burner to the control circuit board are visible. Squeeze the locking catches together and pull the two connectors apart. The burner can now be removed.
4. Reinstall in reverse order.

### ■ 4.2 Firing element

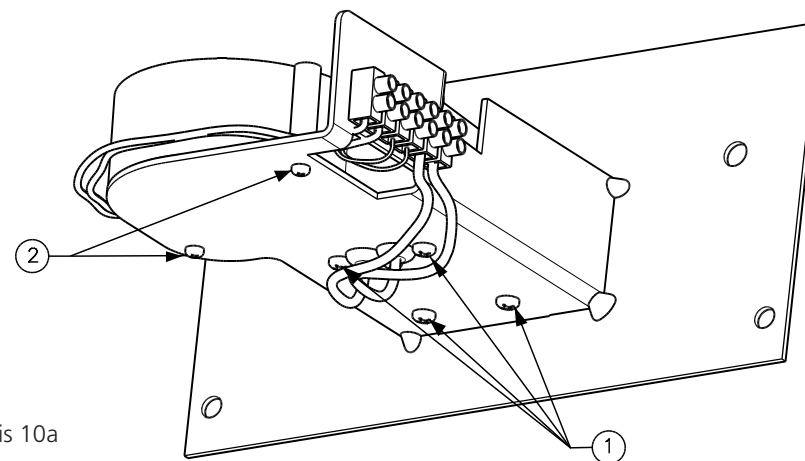
1. Remove the burner as above.
2. Remove the four screws (1) holding the upper part of the ignition bracket. The firing element is now free.
3. Disconnect the firing element's cables from the triac control and the terminal block.
4. Loosen the screw (3) that secures the firing sleeve. Remove the firing sleeve from the element. Pull out the cables from the lead-ins.
5. Reinstall in reverse order.

### ■ 4.3 Combustion fan

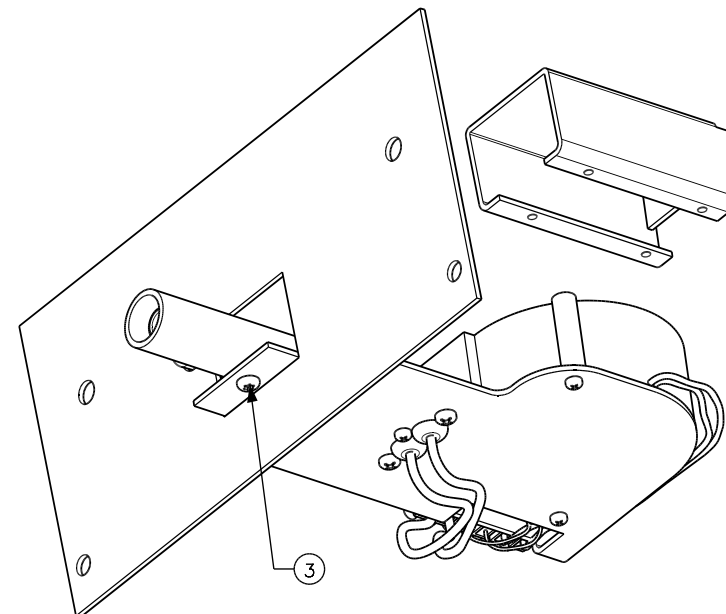
1. Remove the burner and the ignition console according to the Firing element section.
2. Remove the red and the blue cable from the terminal block on the side of the bracket.
3. Remove the screws (2) holding the fan to the bracket.
4. Reinstall in reverse order.

### ■ 4.4 Flame detector

1. Remove the burner and the ignition console according to the Firing element section.
2. Remove the cables from the terminal block in the side of the bracket.
3. Remove the flame sensor, but first note how it sits at the side of the bracket.
4. Reinstall in reverse order. The flame sensor must stick in approximately 5 - 10 mm through the burner flange.



Joonis 10a



Joonis 10b

## ■ 4.5 Hot air fan

Work is best carried out with both side hatches removed, but they can also be accessed from one side or the other.

1. Remove the plug from the wall socket.
2. Open the top panel.
3. Loosen the screw on the top of the side panel.
4. Snap the back of the side panel from the stove's back plate by prizing back the top and bottom corners of the side panel.
5. Unhook the panel, out - forwards.
6. Carefully pull the connector barrels from the fan motor.
7. Loosen from the back the two screws that fasten the fan bracket to the back plate and coax the fan out.

## ■ 4.6 Control circuit board

1. Remove the plug from the wall socket.
2. Remove one of the side hatches according to the Hot air fan section.
3. Loosen the edge contacts on the control circuit board's long sides by pulling them straight out.
4. Disconnect the cable for the control panel located in a connector on the right edge of the control circuit board. Press in the hook on the underside of the connector and pull the cable straight out to the side.
5. Release the three panel screws on the rear of the stove and remove the control circuit board.

## ■ 4.7 Fuses

1. There are two fuses on the stove's input connector. Both are 3.15A slow.
2. When replacing the fuses pull the connector cover straight out to access the fuses (Fig. 11).

## ■ 4.8 Temperature sensor and fused switch

This work must be carried out by an authorised engineer.

## ■ 5 Warranty

For warranty issues Ariterm Sweden AB refers to our local Distributor.

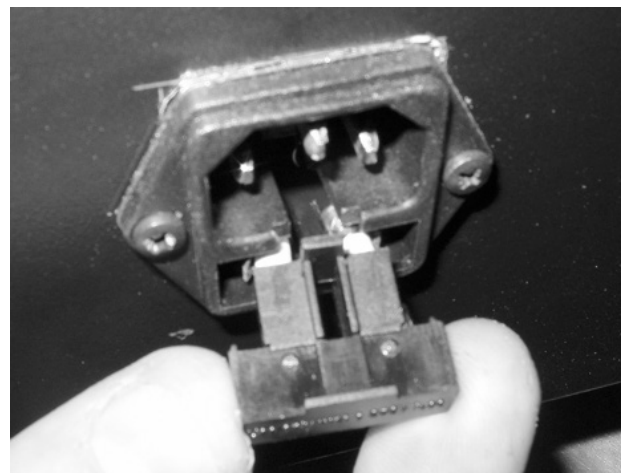


Fig. 11

**Declaration of conformity / Försäkran om överensstämmelse  
Konformitätserklärung / Vaatimuksenmukaisuusvakuutus**

**Ariterm Sweden AB  
Flottiljvägen 15  
S-39241 KALMAR**

declare under our sole responsibility that the product / försäkrar under eget ansvar att produkten  
erklären in alleiniger Verantwortung, daß das Produkt / vakuuttaa omalla vastuulla että tuote

## Pellet stove Ariterm Lilla Frö

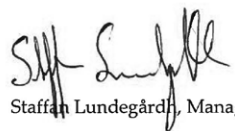
to which this declaration relates is in conformity with requirements of the following directives:  
som omfattas av denna försäkran är i överensstämmelse med följande direktiv:  
auf das sich diese Erklärung bezieht, konform ist mit den Anforderung der Richtlinien:  
jota tämä vakuutus koskee on yhteensopiva seuraaviin määräyksiin

**EMC Directive 89/336/EEC  
Low Voltage Directive 73/23/EEC,  
including amendments by the CE marking Directive 93/68/EEC**

The conformity was checked in accordance with the following EN-standards  
Överensstämmelsen är kontrollerad i enlighet med följande EN-standarder  
Die Konformität wurde überprüft anhand der EN-Normen  
Yhdenmukaisuus on tarkastettu seuraavien EN-standardien mukaan

- EN 55014, EN61000-4-2, -3, -4, -5, -6 Level 2, Emission and immunity by electromagnetic disturbances.
- EN 60335-1:1994, Safety of household and similar appliances - Part 1: General requirements.
- EN 14785:2006 Residential space heating appliance fired by wood pellets - Requirements and test methods.

Kalmar 2013-10-22



Staffan Lundegård, Managing Director

## ■ The Clean Air Act 1993 and Smoke Control Areas

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).

The Secretary of State for Environment, Food and Rural Affairs has powers under the Act to authorise smokeless fuels or exempt appliances for use in smoke control areas in England.

In Scotland and Wales this power rests with Ministers in the devolved administrations for those countries. Separate legislation, the Clean Air (Northern Ireland) Order 1981, applies in Northern Ireland. Therefore it is a requirement that fuels burnt or obtained for use in smoke control areas have been "authorised" in Regulations and that appliances used to burn solid fuel in those areas (other than "authorised" fuels) have been exempted by an Order made and signed by the Secretary of State or Minister in the devolved administrations.

Further information on the requirements of the Clean Air Act can be found here :  
<http://smokecontrol.defra.gov.uk/>

Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements

The Ariterm Lilla Frö pellet stove has been recommended as suitable for use in smoke control areas when burning wood pellets.

If these instructions are not followed at installation, operation and maintenance, Ariterm Sweden AB's applicable warranties are not binding. Ariterm reserves the right to make changes to components and specifications without prior notice.



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